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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,192	04/02/2004	Gi-joong Jeong	Q80883	7520

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EXAMINER

ING, MATTHEW W

ART UNIT PAPER NUMBER

3637

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/816,192

Applicant(s)

JEONG ET AL.

Examiner

Matthew W. Ing

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 5-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

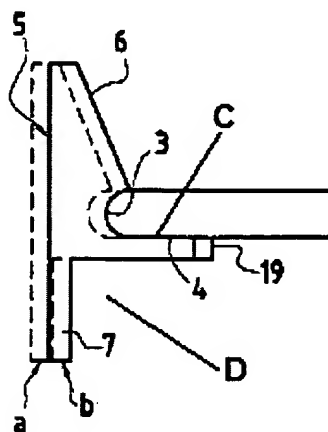
**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 9 and 10, so far as defined, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lye (6,227,636) in view of Vardon (2002/0190620).
3. Lye teaches the structure substantially as claimed, including a main body (2) formed with a storage compartment (6), wherein said storage compartment has a plurality of interval adjusting holes (45) disposed at a side of an inner wall; a door (7) hingedly connected to the main body; at least one shelf (25) provided inside said storage compartment (see Figure 1), said shelf having a hook portion (38) selectively coupled to one of the plurality of the interval adjusting holes.
4. The only difference between Lye and the invention as claimed is that Lye fails to teach a shelf comprising a horizontal glass; a glass supporter coupled to edges of the glass, said glass supporter comprising a first side surface and second side surface; a first coupling portion and a second coupling portion the first and second coupling portions respectively extending downward from the first and second side surfaces; first and second brackets coupled, respectively, to the first and second coupling portions of the glass supporter, and capable of being attached onto a wall of the storage compartment; wherein the first side surface of the glass supporter and an exterior side surface of the first bracket form a substantially flush exterior side surface.
5. Vardon, however, teaches a refrigerator shelf comprising a horizontal glass (1); a glass supporter (2) coupled to edges of the glass, said glass supporter comprising a first side surface and second side surface (Item C in Figure 2 Annotated); a first coupling portion and a second

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coupling portion (7), forming first and second cavities (Item D in Figure 2 Annotated), respectively, and extending downward from, respectively, the first and second side surfaces (C); first and second brackets (12) coupled, respectively, to the first and second coupling portions of the glass supporter, and capable of being attached onto a wall of the storage compartment; wherein the first side surface (C) of the glass supporter and an exterior side surface (i.e., the upper edge of Item 18) of the first bracket form a substantially flush exterior side surface; wherein the glass supporter (2) is disposed between the first and the second brackets (12).



**Figure 2, Annotated**  
**From Vardon (2002/0190620)**

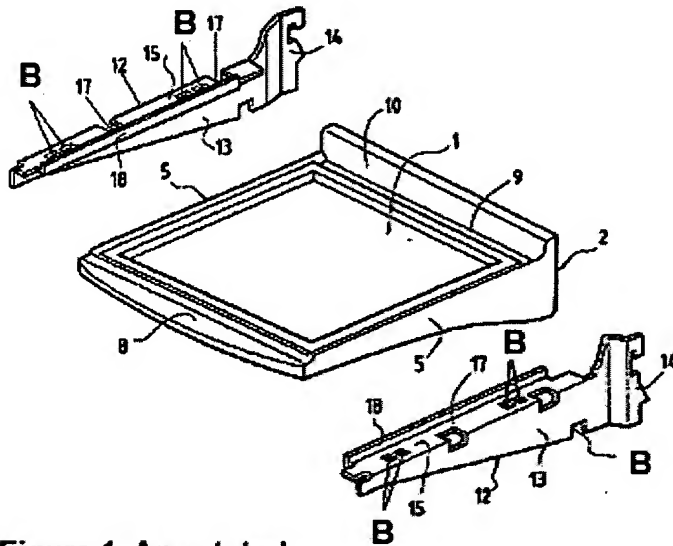
6. The examiner points out that Item 18 is described as "[following] the contours of the supporting surface" (see paragraph 43, lines 18-23); and that this can be interpreted to mean Item 18 extends the entire length of thickness (19). Such a configuration of Item 18 would obviously leave the upper edge of Item 18 flush with the first side surface (C). The examiner also points out that at least a portion of the glass supporter (2) is disposed between the first and the second brackets (12).

7. It would have been obvious to one of ordinary skill in the art to include the shelf, glass,

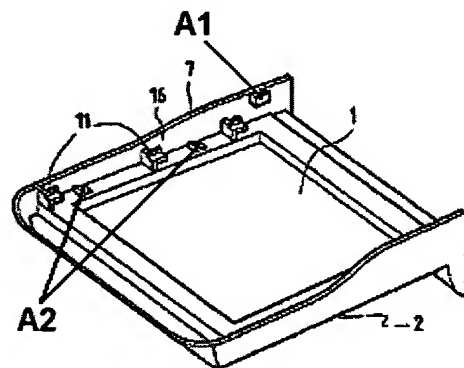
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glass supporter, bracket supporter, supporting brackets, and coupler of Vardon in the refrigerator of Lye in order to provide the user with shelves that are hygienic, lightweight, and easily cleanable, thereby providing the structure substantially as claimed.

8. Claims 1-2, 5-8, and 15, and claims 11-14 so far as defined, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lye (6,227,636) in view of Vardon (2002/0190620) and Maruta (2001/0030491).



**Figure 1, Annotated  
From Vardon (2002/0190620)**



**Figure 3, Annotated  
From Vardon (2002/0190620)**

9. Lye and Vardon teach the structure substantially as claimed, including a refrigerator shelf comprising a glass (1) on which foodstuffs obviously can be laid; a glass supporter (2) coupled to edges of the glass, said glass supporter comprising a main portion (6) coupled to (3) the edges of the glass, and a first coupling portion and a second coupling portion (7 - aka "bracket supporters"), forming first and second cavities (Item D in Figure 2 Annotated), and each extended downward at opposite sides of the main portion (see Figure 3) and supported with the supporting bracket (see paragraph 43); first and second brackets (12 - aka "a pair of brackets")

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provided in opposite sides of the glass supporter and supported onto a wall of the storage compartment (see paragraph 43); couplers (Item A1 & A2 - see Figure 3, Annotated) oriented horizontally, disposed inside the first and second cavities (D), and coupling a lower part (7) of the glass supporter with the bracket; holes (Item B – see Figure 1, Annotated) corresponding to each coupler, said couplers and holes comprising “coupling units”; and a plurality of supporting ribs (11) formed, between the couplers, within the cavities (D), with each supporting bracket (12) provided with a bending portion (15) fitted to the supporting ribs (11) via grooves (17 - aka “notches”).

10. The examiner points out that the horizontally-oriented coupler (A1) is stated as being equivalent (see paragraph 43, lines 1-5) to the vertically-oriented coupler (A2); as such, Vardon can be said to teach both horizontal and vertical orientations for the couplers. Additionally, Maruta is viewed as teaching merely the use of coupling units comprising coupling bosses, penetrating holes, and couplers, and not necessarily any particular orientation of such coupling units. Therefore, replacing the couplers (A) of Vardon with those taught by Maruta would provide a structure wherein “the coupler comprises a plurality of screws horizontally penetrated into the plurality of penetrating holes and accommodated in the plurality of coupling bosses”.

11. The only difference between the structure of Lye and Vardon and the invention as claimed is that Lye and Vardon fail to teach the use of coupling units comprised of coupling bosses formed at the bracket supporter, with holes in the supporting bracket corresponding to each boss, and screws penetrating said holes and accommodated in said bosses.

12. Maruta, however, teaches the use of coupling units comprising a plurality of coupling bosses (11b) formed at depending portions (12, 13) of a structure (10); penetrating holes (22a), in

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positions corresponding to each boss (see Figures 2-3), formed in an object (21) to be attached to said structure (10); and couplers comprising a plurality of screws (30) penetrating said penetrating holes and accommodated in said coupling bosses (see Figure 4).

13. Since the coupling units of Lye as modified by Vardon, and the coupling units taught by Maruta, are both equivalent alternative structures used to accomplish the same purpose, it would have been obvious to one of ordinary skill in the art to replace the coupling units of Lye as modified by Vardon with the coupling bosses, penetrating holes, and couplers taught by Maruta in order to increase the structural rigidity of the connections between the supporting brackets and the glass supporter, thereby providing the structure substantially as claimed.

#### ***Response to Arguments***

14. The objections to the specification and drawings, and the rejections under 35 USC 112, are rendered moot by the applicant's amendments to the specification and claims. As such, these objections and rejections are withdrawn.

15. Applicant's arguments regarding the allowability of claim 1 have been considered but are not persuasive. Said arguments have been addressed in the prior art rejections.

16. Other arguments of applicant filed 31 August 2006 have been fully considered but they are not persuasive.

#### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ames, Calvert, Kolbe, Daley, and Kane teach refrigerator shelves comprising a glass on which foodstuffs are laid; a glass supporter coupled to edges of the glass, said glass supporter comprising a main portion coupled to the edges of the glass, and a bracket supporter extended

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downward at opposite sides of the main portion and supported with the supporting bracket; a pair of supporting brackets provided in opposite sides of the glass supporter and supported onto a wall of the storage compartment, each of said supporting brackets including a hook portion, selectively coupled to one of the plurality of interval adjusting holes disposed at an inner side of the refrigerator compartment wall; and a coupler coupling a lower part of the glass supporter with the supporting bracket. Bienick and Avendano teach the inclusion of ribs in structures depending from the main portion of a glass supporter. Johnson teaches the use of bosses for coupling. Brightman teaches the inclusion of ribs in a structure in order to provide reinforcement. Diamond teaches the use of ribs that interface with notches on a planar structure. Swain, Ramesh, Schiedegger, and Bohannan teach the use of coupling units comprised of bosses with ribs between them, penetrating holes in the member to be connected, and screws penetrating said holes and accommodated in said bosses. Chambers and Fowkes teach shelving units wherein the shelf is attached to supporting brackets via screws that penetrate both the brackets and structures depending from the horizontal surface of said shelf. Herrmann and Siegal teach the inclusion of a bending portion on supporting brackets for shelves. Patterson teaches a shelf with depending members coupled to supporting brackets via screws and penetrating holes. Held and Anderson teach brackets with ribs with coupling bosses in between said ribs.

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after



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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew W. Ing whose telephone number is (571) 272-6536. The examiner can normally be reached on Monday through Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MWI

29 September 2006

  
**Jose V. Chen**  
**Primary Examiner**